

WHAT IS CLAIMED IS:

1. A slot-in type reproducing/recording apparatus comprising:
an apparatus body having a slot for inserting and ejecting a disk; and
a hold assembly provided inside the apparatus body for accommodating the disk,
5 the hold assembly having three arms that respectively press an outer circumferential edge
of the disk at different points with predetermined biasing force.
2. The slot-in type reproducing/recording apparatus according to claim 1, further
comprising:
a base plate having the hold assembly;
10 a recording/reproducing mechanism for recording on and/or reproducing from the
disk; and
a loading mechanism for advancing and retracting the base plate between a
position where the disk faces the recording/reproducing mechanism and a position near
the slot.
- 15 3. The slot-in type reproducing/recording apparatus according to claim 2, further
comprising an arm lock mechanism that locks the arms when the arms hold the disk.
4. The slot-in type reproducing/recording apparatus according to claim 3, further
comprising an arm unlock mechanism that releases the lock of the arm lock mechanism.
5. The slot-in type reproducing/recording apparatus according to claim 2, wherein
20 the base plate has a clamper for holding the disk and a clamper hold mechanism for
moving the clamper toward the disk when the base plate advances to the
recording/reproducing mechanism and for moving the clamper away from the disk when
the base plate retracts toward the slot.
6. The slot-in type reproducing/recording apparatus according to claim 2, wherein
25 the apparatus body has a shutter for covering the slot when the recording/reproduction
mechanism is in operation and for opening the slot when the recording/reproducing
mechanism is not in operation, the shutter being coupled through a coupling mechanism
with a switch lever that stops driving the loading mechanism and starts driving the
recording/reproducing mechanism.

7. The slot-in type reproducing/recording apparatus according to claim 1, further comprising:

an eject arm for pushing out the disk toward the slot, the eject arm being one of the three arms; and

5 a dumper mechanism for reducing push-out force of the disk pushed out by the eject arm.

8. The slot-in type reproducing/recording apparatus according to claim 2,

wherein the loading mechanism includes a motor, a gear mechanism coupled with the motor, and a rack coupled with the gear mechanism and provided along an 10 advancement and retraction direction of the base plate,

wherein a groove is formed on at least one of the rack and the base plate for allowing a relative movement of the rack and the base plate along the advancement and retraction direction, and

15 wherein a start cam mechanism is formed between the base plate and the gear mechanism for starting rotation of the motor when the base plate advances to a predetermined position.

9. The slot-in type reproducing/recording apparatus according to claim 2, further comprising a manual eject mechanism for manually ejecting the hold assembly, the manual eject mechanism having an eject member that ejects the disk by a plurality of 20 pushing operations.

10. The slot-in type reproducing/recording apparatus according to claim 9, further comprising a disk lock mechanism for locking the disk when the eject member is manually pushed.

11. The slot-in type reproducing/recording apparatus according to claim 9, wherein 25 the manual eject mechanism includes a one-way clutch that transfers the drive of the eject member only in a direction in which the eject member is manually pushed.

12. The slot-in type reproducing/recording apparatus according to claim 1, wherein the recording/reproducing mechanism is attached to the apparatus body in a manner that an end thereof is turnably supported while the other end is swingable toward and away

form the disk accommodated in the hold assembly.

13. The slot-in type reproducing/recording apparatus according to claim 12, further comprising:

a base plate having the hold assembly;

5 a recording/reproducing mechanism for recording on and/or reproducing from the disk;

a loading mechanism for advancing and retracting the base plate between a position where the disk faces the recording/reproducing mechanism and the position near the slot; and

10 an operation switching mechanism for switching advancement and retraction of the base plate and swing operation of the recording/reproducing mechanism.

14. The slot-in type reproducing/recording apparatus according to claim 2,

wherein the hold assembly includes a selector plate provided on the base plate,

wherein one of the three arms is an eject arm that is adapted to push out the disk

15 toward the slot and advancable and retractable relative to the base plate whereas the two remaining arms are main arms that are respectively adapted to press the disk and turnably attached to the base plate, and

wherein a base-plate advancement unlock mechanism is provided between the selector plate and the base plate for allowing the advancement of the base plate only when 20 the three arms hold the disk at a predetermined position.

15. The slot-in type reproducing/recording apparatus according to claim 14, wherein the base-plate advancement unlock mechanism includes a bridge plate that is reciprocally movable in a direction orthogonal to the advancement and retraction direction of the base plate and provided with an end that can be held by a holding block, and a bridge cam that

25 is engagable with a cam portion formed on the bridge plate and moves the bridge plate toward the other end of the bridge plate in accordance with the advancement of the eject arm when the main arms are at predetermined positions.